



*The Radio Amateur Society
of Australia*

March 2026

QTC Magazine

What a National Representative Body Should Look Like

Alexandre Povov - Did he Invent Radio?

Holding the High Ground - the Tax on Our Repeaters

A.I. And its Impact on Amateur Radio - Your Opinion

A. R. Software - Should Authors Take it to the Grave?

BAREC New Tower

And all the regular features

In This Issue:

From the President

The Indispensable Role of a National
Amateur Radio Association

Editorial

Holding the High Ground

Antennapalooza is back in 2026

QRM.GURU

Artificial Intelligence In Amateur Radio

This is Amateur Radio

Elite Communications (Ad)

Aleksandr Popov – Inventor of Radio?

DX Happenings

Modern Day Lightning Detection

Dits n Dahs

News from ZL

Why Should Our Work Die With Us?

On the Air, On the Frontier: BAREC's
Gredgwin Remote Station



Calculate the resonance in megacycles

Publication Information

3 Contact: info@vkradioamateurs.org
Website: <http://vkradioamateurs.org>

3 **QTC** is a publication of The Radio
Amateur Society of Australia

6 ABN: 64 687 227 446 (RASA)

7 **QTC** is published monthly. If you would
10 like to receive your copy you can either
10 visit our web site to download or send us
an email and we'll put you on our
distribution list.

11 You are welcome to join RASA or simply
14 make a donation to support our work.

15 **QTC** is Copyright © 2025

16 **Cover picture credit:**

21 Ian Jackson VK3BUF

23 **Contributing Items For**
24 **QTCMagazine**

26 QTC Magazine welcomes contributions
29 for future editions. When planning to
submit an article, please read our
submission guidelines first.

32 Following the guidelines will save you
and the editing team a lot of time and
effort. The guidelines are [HERE](#)



From the President

Paul VK2APA



Similar to any organisation, RASA routinely assesses its achievements and outlines its future objectives. To accomplish this, it is essential to remain aware of the roles and purposes, both locally and globally, of a national representative body.

I made some notes which became the article below.

The Indispensable Role of a National Amateur Radio Association

In the dynamic world of amateur radio, a national association serves as the crucial framework guiding the hobby into the future. From regulatory advocacy to educational outreach, these organisations are the bedrock of the hobby. However, in 2026, their effectiveness depends not just on *what* they do, but *how* they do it—specifically through the pillars of transparency and member consultation.

1. The Voice in the Regulatory Wilderness

Perhaps the most vital function of a national association is regulatory advocacy. In a spectrum-hungry environment where commercial interests see our bands as prime real estate, the association is our bulwark. They tirelessly:

- Protect Frequencies: Fighting to retain existing amateur bands at the ITU and national levels.
- Shape Policy: Influencing regulations regarding antenna restrictions and power limits.
- Represent the Community: Acting as the official liaison between thousands of individual operators and government agencies like the ACMA, FCC or Ofcom.

2. The Pillar of Governance: Transparency and Consultation

For a national association to be truly effective, it must operate with an "Open Door" policy. Because these organisations are member-supported, their legitimacy relies on a social contract of trust.

- Transparent Decision-Making: This involves open board meetings, clearly published financial reports, and accessible minutes. Members need to see how their dues are being utilised and how strategic priorities are set.
- Active Consultation: The hobby is a vast "brain trust." A healthy association regularly consults its membership before making major policy shifts. This includes using surveys, town halls, and public comment periods to ensure that the leadership's vision aligns with the reality of the operators on the ground.
- Accountability: Transparency ensures that leaders remain answerable to the



membership, preventing the organisation from becoming an "echo chamber" and ensuring it evolves alongside the hobby.

3. Education and Training: Forging the Next Generation

A national association is the primary engine for education. They ensure a continuous pipeline of new operators by:

- Developing License Materials: Creating and updating question pools and study guides.
- Providing Resources: Offering online courses and manuals for both new hams and those pursuing advanced technical skills.
- Promoting Best Practices: Setting the standard for ethical and efficient operating procedures.

4. Promoting Amateur Radio within the general community

A National Body (such as RASA or the WIA in Australia or similar national societies in other countries) plays a major role in Public Relations (PR) for Amateur Radio. Its purpose is to promote amateur radio nationally, represent the interests of radio amateurs, and maintain a positive public image of the service.

Representing Amateur Radio Nationally

The national association acts as the official voice of amateur radio within a country.

Responsibilities include:

- Representing amateur radio to government authorities and regulators
- Representing the country in international organisations such as the IARU
- Protecting amateur radio spectrum and operating privileges
- Promoting the value of amateur radio to the public

These organisations work to promote and protect the art, science, and enjoyment of amateur radio and develop the next generation of operators.

Coordinating Public Relations Activities

A national body organises PR activities across the country.

Typical responsibilities:

- Developing national PR campaigns
 - Producing promotional materials, brochures, and media resources
 - Providing guidelines and tools for local clubs
 - Encouraging participation in national events such as a Field Day
- They also maintain PR resources, media contacts, and promotional campaigns to increase public awareness of amateur radio.

5. Unifying a Diverse Community



Amateur radio encompasses everything from Morse code purists to satellite and data. The body serves as a unifying force by:

- Hosting National Convention: Creating spaces for networking and hands-on learning.
- Publishing Journals: Providing a curated space for news, technical innovations, and community stories.

Conclusion

A national amateur radio body is the guardian of the hobby. However, its true strength lies in its relationship with its members. By combining professional advocacy with transparent processes and genuine consultation, the association ensures that it doesn't just speak *for* the hobby, but speaks *with* it. Supporting such an organisation is an investment in a future where every amateur has a voice and every frequency is defended.

The role of an amateur radio association is to serve as a vital protector and advocate for the hobby. Its real power, however, is in its strong and healthy connection with the Amateur Radio Community. By merging professional representation and supporting amateurs with open processes and sincere dialogue, the association guarantees that it not only represents the hobby but also engages with it, fostering inclusivity for everyone, allowing all to contribute to processes that involve important matters. Supporting this organisation is a commitment to a future where every amateur is heard and our access to spectrum and privileges are safeguarded.



QTC

From the Editor



Kudos to the Wireless Institute's Technical Advisory Group for producing the revised Australian Band Plan. The group produced some recommendations, then opened a consultation process late in 2025. There was some concern over their stated intention not to reveal content of the submissions, however there appears to have been a change of mind, and the feedback on each recommendation was included in the summary report.

The review was timely, as band usage has moved, and clarity was needed in some areas. The methodology was thorough, with explanations of why and how conclusions were drawn.

We're a little concerned that at times the Australian Band Plan is referred to as the WIA bandplan. To allow it to be so named would be an unfortunate error, as its success depends on widespread acceptance of the band plan.

Now, after many years, the WIA has an effective Technical Advisory Group, and while they are on a roll, it would be useful for them to pursue High Power privileges for Australian Amateurs, and also to break the silence on 60 metres.

RASA has put the argument to the ACMA and Department of Defence that there is no technical merit to the Defence's objection to Amateur Radio on a tiny slice of 60 metres.

Australian Amateurs would like to hear the Wireless Institute's position on this. Their last response to RASA's questions

on 60 metres, labelled "Debunked", presented the same Ministerial response as that given to RASA - that the WIA complied with the Defence position to deny Australian Amateurs access to 60 metres, yet no explanation of this is to be found on the WIA website.

A fresh, objective, professional approach to the topic may reveal the real reasons, and who knows, with a bit of collaboration with RASA, we may have a couple of wins.

In this issue of QTC, we again visit Amateur radio history, with a discussion on Alexandre Popov, to whom some, especially the Russians, have attributed the invention of radio. There's an excellent article on the setting up of BAREC's enormous tower for their remote station, along with another item about the threat posed to Amateur Radio by the imposition of huge rental fees for repeater sites.

There's an interesting story about Artificial Intelligence and its possible intrusion into Amateur Radio, and a discussion entitled "Why Should Our Work Die With Us" - suggesting that authors of Amateur Radio software should look at open source, or at least forming a development team.

You can see that this is a bumper issue, and thank you for reading QTC. Please pass QTC around to your Amateur Radio friends.

Holding the High Ground

Why Rising Crown Land Fees Threaten the Future of Amateur Radio in NSW

Across New South Wales, a quiet but serious challenge is emerging for the amateur radio community — one that could fundamentally affect our ability to operate.

At the heart of the issue is access to Crown land.

For decades, amateur radio clubs have relied on elevated Crown land sites — hilltops,



towers and other strategic locations — to install repeaters and radio equipment. These sites are the backbone of reliable communication networks, particularly across regional and rural NSW. Without them, coverage shrinks, signals fail, and networks simply cannot function.

Now, that access is under threat.

The Cost of Staying Connected

Volunteer-run, not-for-profit amateur radio clubs are increasingly being confronted with Crown land rental determinations that are financially unsustainable. In some cases, clubs have been quoted fees in the vicinity of \$20,000 to secure or retain access to existing sites.

For organisations run entirely by volunteers — funded by modest membership fees, fundraising efforts, and community goodwill — this level of expense is beyond reach.

These are not commercial telecommunications providers. They are community groups providing a public benefit.

If these costs continue to escalate, clubs may be forced to shut down repeaters, abandon sites, or scale back their networks. The consequences would extend far beyond hobbyist inconvenience.

A Lifeline for Those Who Can't Access HF

For many amateurs, repeaters are not just convenient — they are essential.

Not every operator has the ability to install outdoor antennas or operate on HF. Increasing urban density, body corporate restrictions, rental agreements, limited yard space, local council regulations, and interference concerns all make erecting HF antennas difficult or impossible.

Others may face physical limitations that prevent them from safely installing or maintaining larger antenna systems.

There are also operators living in retirement villages, apartments, or supported accommodation where external antennas are simply not permitted.

For these amateurs, VHF and UHF repeaters provide their primary — and often only — reliable connection to the wider amateur radio community.

Repeaters allow:

- Participation in **daily nets and technical discussions** - local and worldwide
- Ongoing **mentoring and skill development**
- Encouraging **STEM skills** and **hands-on learning**
- **Social connection** and **mental wellbeing**
- Involvement in **emergency** communications during bushfires, floods, and natural disasters
- Assisting at **community events** and public gatherings

Without access to repeater networks, many operators would effectively be isolated from the hobby altogether.

In this sense, repeaters are not merely infrastructure — they are inclusion.

Without these strategic locations, reliable repeater networks cannot be built or maintained. And without functioning networks, the community support amateur radio provides is significantly diminished.

In rural regions especially, many of the only suitable high-elevation sites are located on Crown land. When access becomes financially prohibitive, there are few — if any — viable alternatives.

For some members, the loss would not mean inconvenience — it would mean silence.

A Call for Real Examples

Steph Cooke, Member for Cootamundra and Shadow Minister for Crown Lands, is currently seeking **real-world examples** of how Crown land rental determinations are impacting community organisations such as amateur radio clubs.

Evidence matters.

Clear, practical examples showing the financial burden placed on clubs will help demonstrate that this is not an isolated concern — it is a statewide issue affecting community infrastructure.

Clubs across NSW are encouraged to:

- Write to their local NSW State Member of Parliament
- CC Steph Cooke at cootamundra@parliament.nsw.gov.au
- Clearly outline the financial impact on their club
- Provide specific figures where possible

A coordinated and evidence-based response will strengthen the case for fairer treatment of not-for-profit amateur radio organisations.

Standing Together

This issue affects every amateur operator in NSW — whether directly today, or indirectly tomorrow.

The amateur radio community has always been built on cooperation, resilience and technical ingenuity.

Now, those same qualities are needed to ensure continued access to the sites that make our networks possible.

Because when repeater access is lost, it is often the most vulnerable and restricted operators who lose their connection first.

If your club has been impacted, your voice matters.

Because when it comes to keeping NSW connected — especially in times of need — losing the high ground is not an option.



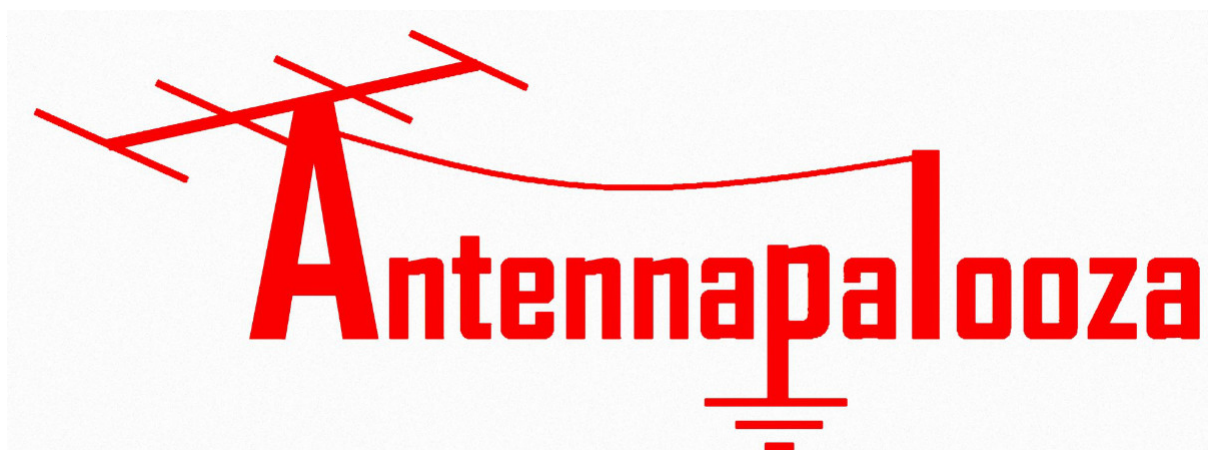
GGREC 6M FM Repeater site in Gembrook where the club was forced to relocate after 20 years, when the site went Commercial

Footnote: Amateur Radio Repeaters located on commercial properties are now being requested to vacate or pay commercial fees. When companies change ownership, the informal agreements become invalid... or an accountant perceives this goodwill as a loss of income.

VK3RASA

REVERSE BEACON NETWORK

Located in Drouin West, Victoria, Australia.



Antennapalooza is back in 2026.
It's happening on Sat/Sun the 18th and 19th of April.

This is the tenth such event. For a change of pace, the theme for 2026 will be about POWER. How power reaches our homes, how we organise power in our shacks, battery & portable power and what's new with Solar. We will have a series of speakers on related topics under the pavilion.

We are also privileged to have a guest presenter from Outlook Industries, a Gippsland manufacturer who will demonstrate radio controlled surveillance carts that have been developed for the Australian army. This equipment uses a unique combination of power strategies to give long operational life in the field.

We hope to see many visitors to the upcoming 2026 event. As in the past, it will take place in Drouin West and the details are on the [Antennapalooza website](#)

Come for an hour or come for the whole weekend with your caravan and camping gear. Attendance is free. No bookings are required.

QRM.GURU



QRM.guru has been developed to assist Radio Amateurs in dealing with RF noise and interference. This is an educational and reference resource. The information provided on these pages is not unique or regarded as a new discovery. QRM.guru is a volunteer powered resource.

Visit the [QRM.GURU website](#) to learn how to track down and minimise QRM in your shack.

Artificial Intelligence In Amateur Radio

IT'S HAPPENING

Please tell us what you think

This is an invitation to a serious survey. It presents some key scenarios, but also asks readers to submit their thoughts on this topic. AI is coming to Amateur Radio, whether we like it or not, but it is not too late for us to shape what will become normal and what we should deem to be unacceptable.



AI is reshaping interactions between humans and machines. Amateur radio is a hobby where those with an interest in building and using communications technology can make contact with like minded people. Yes we already have automated responses. Radios can play segments of pre-recorded audio when calling CQ. CW and RTTY operators can use scripted responses not physically generated by humans. FT8 digital stations can automatically try to find other FT8 stations. These are all presently acceptable uses of automation, but how far would you like to see this go?

(It is worthwhile noting that when the ACMA called for submissions for the update of the new LCD, that RASA provided a submission which included a suggested addition that sought to outlaw the use of automated systems being used in Amateur Radio where the station did not make it clear that the operator was computer generated. But like *all* of the submissions from Amateurs in that consultation, the recommendation was ignored and the ACMA simply published their draft plan as a final plan.)

We will collect, collate and report on your email responses. Yes, we did use an AI to generate this image.

Situation 1

An operator sets up an AI with audio coupling to their transceiver. The operator gives the AI system control over the antenna rotator and PTT switching. The operator then goes to work or goes away for a weekend.



In the mean time the AI is putting out CQ calls in their voice, with their callsign, gathering contact details, names and signal strength reports, replying with reports and chatty anecdotes of its own. Distant stations are NOT aware that the operator is not really present.

Your thoughts?

- (A) Yes this is perfectly acceptable – as this is a hobby for experimentation.
- (B) Acceptable provided the station adds a comment that it is an AI operator.
- (C) It is ok to do this provided it is not being used for Award gathering or Contesting.
- (D) This should never be done under any circumstances.

Add your own comments about **Situation 1**

Situation 2

An expansion on Situation 1. Multiple transceivers working different bands simultaneously on 80M, 40M 20M and 6M. Each radio has an individual AI using your voice. You are present, perhaps reading a magazine, or simply watching as your contest log slowly fills out.



- (A) Nobody knows it is an AI, but this is ok and clever, because there is still a human supervising.
- (B) This is okay because you have asked it to announce that it is an AI working as a Second Operator.
- (C) Not okay to do this with voice operation, but okay if it is only using CW or a digital mode.
- (D) This is unsportsmanlike behaviour and should be banned from all contesting

Add your own comments about **Situation 2**

Situation 3

You decide to play a prank on a fellow amateur friend. You sample his voice, provide his callsign to an AI. You instruct it to role-play that it is a new Amateur, just



learning how to operate after coming up from CB bands. Then you hook it up to a 70CM radio tuned to your local FM repeater. Then you sit back and watch the fun.

- (A) This is clever and funny. If people don't like it, they should get a life.
- (B) This is okay if you get prior permission from the operator being spoofed.
- (C) This is a highly unethical misrepresentation and should never be done.

Add your own comments about **Situation 3**

Situation 4

Your local radio club has had its own Club callsign for many years. The club sets up an AI up at the Club Shack on 2 Metres using the Club Callsign and a generic voice. At any time, members can call it, chat with it and get signal strength reports. The system learns names and callsigns and can respond in a friendly way when it recognises a station and may sometimes simply join in with the contact for a few minutes.

- (A) This is okay and fun because the members are aware that the operator is not real.
- (B) This is fine if set up on a simplex frequency that the Club uses, but not on a repeater.
- (C) This is not an appropriate use of a Club callsign.

Add your own comments about **Situation 4**

Item 5

Would you like to see the consensus recommendations of this survey be added to the **Australian Band Plan** as another aspect of normal Gentleman's Agreement operating conventions?

Feel free to comment.

Fundamentally, it is impossible to effectively police bad actors using AI in Amateur Radio, but this does not mean that we should not discuss it and perhaps develop some etiquette about how it may be used by way of Gentleman's Agreement. Without such conventions in place, some of the worst aspects described here may become normal and commonplace.

This survey is open to everyone, not just RASA members.

Submit your responses to our survey here:

Send an email to info@vkradioamateurs.org.

- Put **AI Survey** in the subject line and
- Simply add your responses to the situations described in the text of the email.

You may indicate whether you would wish to remain anonymous or if you are willing to attach your callsign to the response when results are compiled and published.



This is Amateur Radio

Update

In January we saw the addition of a comprehensive Australian Band Plan as a series of pages. This is sector wide approved version from 2025, will be updated to match the 2026 revised Australia Band Plan.

You can reach the overview page [HERE](#)

The only addition for March is an interesting grey-tile page on how to choose the best coax feedline for your antenna system. It is based upon the study published in the 2020 QTC article.

Working on the basis that the average coax run is around 15 metres long from radio to antenna, the article road-tests several coax types and shows how each one actually performs on the most common Amateur bands. It is not just a reprint of manufacturer tables, it shows the results of live experiments.



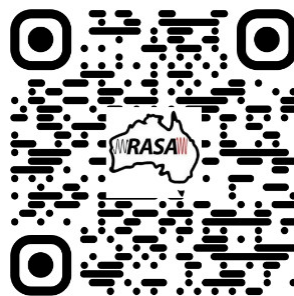
This page can be reached from the grey tile on the TIAR main site [HERE](#), or jump directly to the new page [HERE](#)

Look for the monthly updates on new additions to the [This Is Amateur Radio](#) website.



Radio for the Curious & Creative

The Radio Amateur Society of Australia



Elite

Communications & Electronics

www.elitecommunications.com.au



\$129
BT MIKE



\$149
FOLDING
ANTENNA

\$639
WASHINGTON
10/12M



Backlight colors:



\$559
GEORGE II
27Mhz



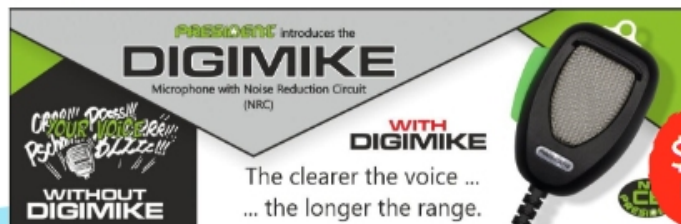
\$440
RANDY III
AM/FM



PRESIDENT FAN COOLER
12VDC / 0.8W / 40 x 40 x 20 mm / 2 PIN



\$59
FAN COOLER



\$99.95
DIGI MIKE



OPEN: Monday to Friday - 9am to 4pm
Sat: By Appointment
CLOSED: Sunday & Public Holidays

DELIVERING AUSTRALIA WIDE
(07) 5605 2000

SCAN
ME



A friend of mine, Issy VK2CAA dropped off this book and I had to find out....

Aleksandr Popov – Inventor of Radio?

By Paul Anslow, VK2APA

Revisiting a long-running debate through the lens of amateur radio history



Among radio amateurs, few topics spark as much lively debate as the question: “Who invented radio?” Depending on where you live — and which history book you read — the answer can vary wildly. In Australia, we usually hear the names Marconi, Hertz, or Tesla. Yet in Russia and parts of Eastern Europe, one name dominates above all others: Aleksandr Stepanovich Popov.

So who was Aleksandr (Pronounced Alexander) Popov, and can he genuinely be called the inventor of radio? Or is the truth, as radio amateurs so often discover, more nuanced than a single callsign in a logbook?

The Scientific World Before Radio

By the late 19th century, the groundwork for radio had already been laid.

James Clerk Maxwell had predicted the existence of electromagnetic waves in the 1860s, and

Heinrich Hertz experimentally confirmed them in the 1880s.

These discoveries proved that invisible waves could travel through space — but they did not yet lead to practical communication systems.

This distinction is crucial. Many scientists demonstrated *radio phenomena*, but invention implies practical application, repeatability, and intentional communication. This is where the debate becomes interesting.

Who Was Aleksandr Popov?

Aleksandr Popov was born in 1859 in what is now Russia. He was a physicist and lecturer with a strong interest in atmospheric electricity and electromagnetic phenomena. Unlike commercial entrepreneurs, Popov worked primarily in academic and naval environments rather than in industry.

Popov's most famous public demonstration took place on the 7th of May 1895, when he presented a device to the Russian Physical and Chemical Society. His apparatus could detect electromagnetic disturbances — particularly those caused by lightning — using a coherer-based receiver and an antenna system, both designed by Popov. Today's Amateurs are familiar with hearing electromagnetic disturbances on the lower HF bands from storm activity.

That date is still celebrated in Russia and also in some Eastern Bloc Countries, as "Radio Day."

Right: One of Popov's receivers, with a chart recorder (white cylinder) to record lightning strikes]



Popov's Key Contribution: The Antenna and Receiver

One of Popov's most significant achievements was the practical use of an elevated antenna and earth connection with a receiver. To radio amateurs, this immediately rings familiar bells. Even today, antenna design and grounding remain core to effective radio operation.

Popov's system evolved beyond lightning detection. By 1896, he had successfully transmitted Morse code signals over distances of several hundred metres, later extending to kilometres. Notably, he demonstrated ship-to-shore communication for the Russian Navy — a use case strikingly similar to early maritime radio elsewhere.

From a technical perspective, Popov clearly understood the essentials of radio reception and signalling.



Radio pioneer Aleksandr Popov on a 1989 USSR stamp. The text says "Inventor of radio, A. S. Popov, 1859–1906. Demonstration of the first radio, 1895.

So Why Isn't Popov Universally Credited?

Here's where the story diverges from that of Guglielmo Marconi.

Popov:

- Did not aggressively patent his work
- Published selectively, often in Russian
- Focused on scientific and naval applications
- Had little interest in commercial exploitation

Marconi, on the other hand:

- Filed patents early and widely
- Built a commercial enterprise
- Demonstrated long-distance communication publicly
- Actively promoted his system internationally

For amateurs familiar with regulatory and licensing realities, this difference matters. History often favours those who document, protect, and deploy their work — not just those who discover it first.

The Amateur Radio Perspective

From an amateur radio standpoint, the "Popov vs Marconi" debate mirrors many discussions we still have today:

- Is innovation about first discovery, or practical implementation?
- Does contribution outweigh commercial success?
- How much does documentation matter? (a lot!)

Popov's work undeniably advanced receiver technology and antenna use. His work helped transition radio from laboratory curiosity to operational tool. However, there is insufficient documented evidence that Popov independently developed a complete, scalable radio communication *system* before Marconi. Popov's goals were different to those of Marconi.

That doesn't diminish his importance — it refines it.

Multiple Inventors, One Technology

Modern historians increasingly agree that radio had no single inventor. Instead, it emerged from the combined efforts of:

- Maxwell (theory)
- Hertz (proof)
- Branly (coherer)
- Lodge (tuning and signalling)
- Popov (receivers and antennas) *
- Marconi (system integration and deployment)

And many more followed...

Sound familiar? It's not unlike modern amateur radio, where progress comes from shared experimentation, iteration, and incremental improvement rather than lone genius.

* **An alternative perspective** - If you agree that the spark utilised in Popov's demonstration to generate an electromagnetic disturbance is a "Spark Transmitter", then the demonstration represented a Radio Transmission from a Transmitter to a Receiver, which occurred before Marconi's demonstration, to the British Government, on July 27, 1896. *However, it is important to note that the purpose of this demonstration was not one of intentional communication, rather the detection of the electrical disturbances caused by lightning.*

Why This Matters to Australian Amateurs

In Australia, we benefit from a rich radio heritage — from outback radio innovation to early coastal radio services and Beam Wireless Service overseas. Understanding figures like Popov reminds us that radio's history is **global**, collaborative, and often politically framed.

For example, here is a document from the USA's National Security Agency/Central Security Service, with the Iron Curtain bias of that time.

[Did Aleksandr Popov Invent Radio?](#)

As amateurs, we pride ourselves on technical accuracy, curiosity, and respect for those who came before us. Recognising Popov as **a pioneer of radio reception and**

antenna practice is fair and accurate — even if calling him *the* inventor oversimplifies the story.

So... Was Popov the Inventor of Radio?

The detector patented by Marconi operated on principles similar to those of Popov. During that period, significant advancements were being made in science, yet the means of collaboration were limited compared to today. It was quite common for various scientific thinkers to work in isolation and independently develop the same theories, inventions, and solutions.

Following a presentation demonstrating Lightning Detection, on May 7, 1895, Popov then authored an article that was published in the Journal of the Russian Physical Chemical Society: *“I can express my hope that my apparatus will be applied for signaling on great distances by electric vibrations of high frequency, as soon as there will be invented a more powerful generator of such vibrations.”*

Popov's vision was accurate, and though there is still some debate over the validity of the claim, Popov is said to have transmitted the words “Heinrich Hertz” from one building to another on the campus of St. Petersburg University on 24 March 1896. The debate stemmed from the fact that reports of this demonstration were not published until years later, and the fact that no one could speak of Popov's work because it was for the Navy, and not intended to be public knowledge (the Navy required Popov to sign a non-disclosure statement).

So, the most honest answer is: **no — but he was one of several of its essential architects.**

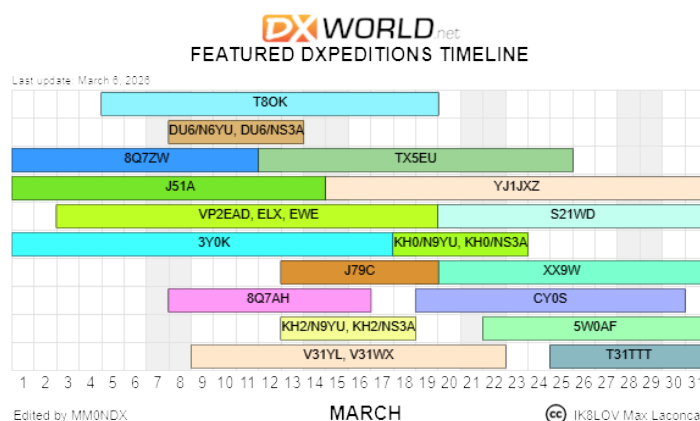
Aleksandr Popov deserves recognition as a brilliant experimentalist whose work directly influenced early radio practice. But invention, in the fullest sense, belongs to a *community* of minds rather than a single individual.

And that, perhaps, is a conclusion radio amateurs everywhere can agree on.

Remember Aleksandr Popov - Radio Day, on the 7th of May.

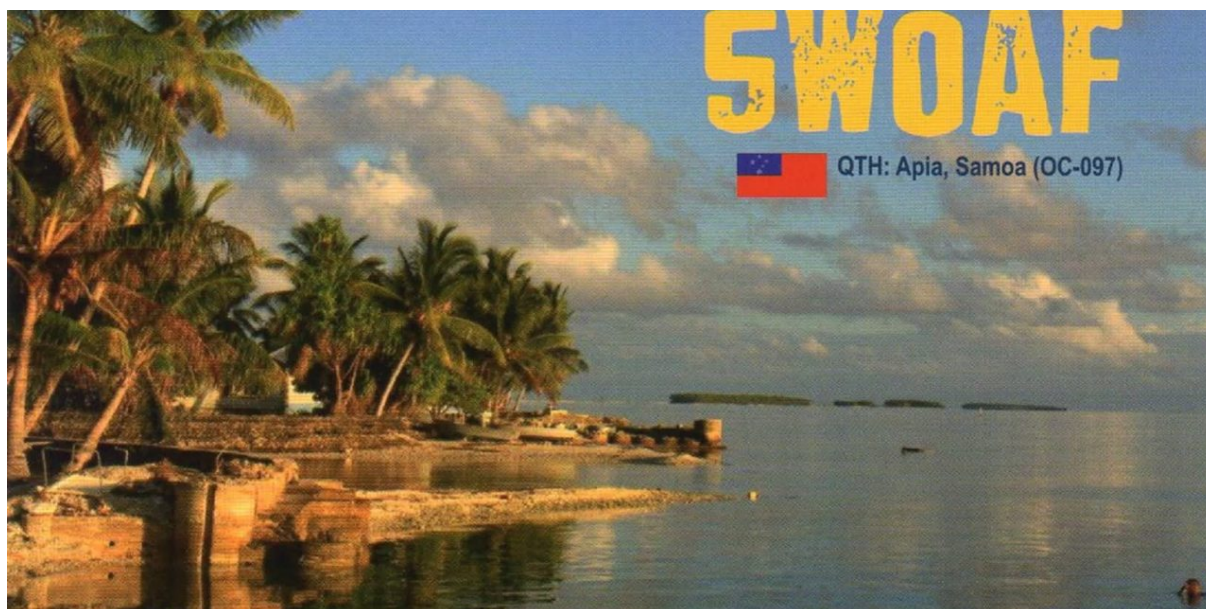


DX Happenings



Click on the image above to visit the DX World website

[POSTPONED] by Jacek, SP5EAQ



In less than two weeks, I was scheduled to fly with Qatar Airways to Doha, then continue to Brisbane and finally to Apia. Since then, the geopolitical situation in the Middle East has changed significantly.

The airspace of several countries, including Qatar, has been closed, and even if it reopens soon, there is no guarantee that the situation will remain stable. Because of this, I had to consider postponing my DX-pedition, possibly until September/October 2026. This has been a very difficult decision. My tickets are already purchased, the accommodation deposit has been paid, and all arrangements are in place. Some of these costs will, unfortunately, be lost.

At the moment, both Qatar Airways and Emirates—who effectively monopolize travel between Europe and Australia/New Zealand, the main hubs for the South Pacific—are affected, and the route is disrupted. I will now look for alternative routes that are usually more expensive and have severe luggage limits.

We will keep you updated as soon as new dates are confirmed.

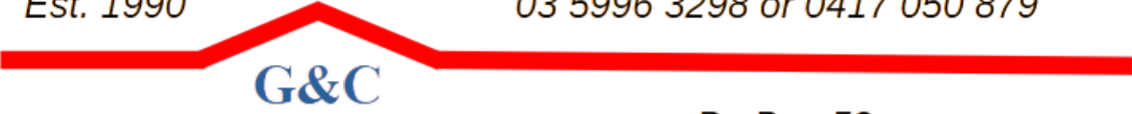


Chris, VK2YUS will again be active from Port Vila, Efate Island, Vanuatu as YJ0CA during March 18 to April 2, 2026.

QRV on SSB only. Operating hours expected to be mostly between 2100z and 1000z.

He uses a 1/4 wave vertical with elevated radials for 40m, and various dipoles & verticals for other bands. QSL via H/c, no LoTW.

Est. 1990
03 5996 3298 or 0417 050 879



G&C

Communications Pty Ltd

*Po Box 53
Leongatha VIC 3953*

Commercial, UHF CB, Amateur & Marine
Two-Way Radio Communications Sales & Service
Antenna, Cables & Accessories





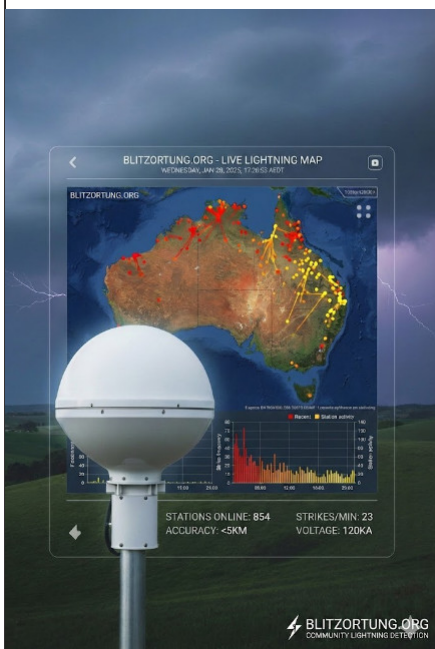




Shop Online: www.gccomm.com.au

Modern Day Lightning Detection

Blitzortung.org is a worldwide, real-time lightning detection network powered by a community of volunteer station operators.



Here is what makes the project unique:

Community-Driven: It is an informal, non-commercial group of citizen scientists who build and manage their own VLF (Very Low Frequency) radio receiver stations.

Real-Time Tracking: The network uses the "time of arrival" (TOA) method to calculate the exact location of lightning strikes and displays them on live interactive maps with minimal delay.

DIY Hardware: Participants must assemble their own detection kits (such as "[SystemBlue](#)") and connect them to the internet to contribute data.

Free for Non-Commercial Use: The processed data is available for free to the public for entertainment and educational purposes, while station operators get access to raw data.

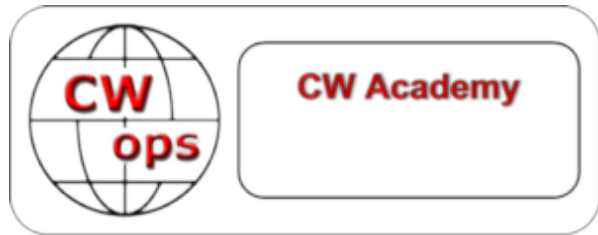
Global Reach: With over 1,800 active stations across 80+ countries, it provides coverage for most of Europe, North America, Oceania, and parts of Asia.



Dits n Dahs

From Chris VK3QB

It's been a very busy start to 2026 with three CW Academy classes running in parallel; Beginners, Intermediate, and Advanced. It is extremely rewarding to see the enthusiasm and improvement from every student.



These classes ran for eight weeks, with Zoom sessions for each class twice a week. Students undertake 45-60 minutes of practice six days a week, which of course requires commitment. However, once these practice sessions become a part of the normal daily routine, results follow.

Would you like to hear from students direct? Join the Zoom session on 16th March at 0830UTC. The link is [here](#).

In the feedback below, speeds reported as 25/15 indicate a character speed of 25 wpm with Farnsworth to slow to a word speed of 15 wpm. This is a proven method for effective teaching of the code. Some feedback from students:

The structure and discipline of meeting twice a week is great; it fosters a sense of accountability and camaraderie. Practice sessions work. The course works. I can now report I am comfortable and getting good results at 25/15, and on a good day 25/18. I am really pleased about that, I know this will get better if I keep up the drills and head copy practice. (Jim VK7JZ - Intermediate)

Gradually over time, we increased both the copy and sending speeds and ended the course with a copy speed of 20/10 (20 wpm character speed and 10 wpm Farnsworth) and a sending speed of 18/9 (18 wpm character speed and 9 wpm Farnsworth). (Jared VK2LDJ – Beginner)

Feeling more confident and relaxed in my sending. Feeling comfortable in sending up to approx 25 wpm, and pushing to 30 wpm. Achieving an understanding of the issues I face, are common amongst all students. (Anon – Intermediate)

I can wholeheartedly recommend the CWA courses and their excellent methodology, I doubt I would have every got on the air without it. (Darrin VK3VDP – Beginners)

One of my reasons for learning CW was to help me develop my interest in POTA. I'm on the cusp of going that way. (Bob VK6POP – Beginners)

Now I'm copying callsigns and QSOs at around 22/12, and sending at about 22/15. My sending is definitely stronger than my copying at this stage, but both have improved massively. (Paul VK1OZ – Beginners)

The thrill — and it has been a thrill — of some of the DX contacts and 25+ wpm local extended QSOs I have made on air after calling CQ at 25 wpm at Chris's prompting (even if these exchanges did feel like pretty nervous encounters at the time). (Peter VK3WOW – Advanced)

If you are a POTA/SOTA/WWFF operator and want to sharpen your skills, or just wanting to improve your sending and copying skills, these classes are proven and effective.

The next round of CWA will be in May – June and I'll be calling for expressions of interest in late March.



If you're interested in learning or improving your Morse Code, check out CW Academy in more detail at:

<https://cwops.org/cw-academy/>

Drop me an email if you have questions or are interested in joining a class later in the year.

Put Your Club Advertisement Here

**Promote your club's events and activities
FREE in QTC**

Here's How:

- Create a Block Advertisement 160mm wide, 110mm High. This will give you a half page advertisement like this.
 - Save it as a PDF
 - Send it to info@vkradioamateurs.org by 1st of the month
 - Re-send it (modified if you wish) every month as needed
- In addition you may wish to contribute a story about your forthcoming event to complement your advertisement.



**Radio for the
Curious & Creative**
The Radio Amateur Society of Australia

News from ZL

By Philip ZL1PSH

John ZL1KLF: a short radio biography

My journey with radio began at 17 when I joined the Royal New Zealand Signals Corps. I was originally an Electronic Technician, but I found myself captivated by the art of transmission during the Basic Communications Course. I promptly changed trades, swapping a soldering iron for a headset. In the 1980s, CW was still a requirement in military comms and I spent four intensive months at the Waiouru Military Camp, grinding my way up to 18 wpm — a skill I would never use again until a posting to a specialist unit put me right back on the key. In that environment, being a "competent operator" was a point of pride.



I eventually found myself leading both Basic and Advanced CW training courses as well as providing operational support. As technology marched forward, CW faded into the background, and after retiring from the military, I stepped away from the key for 25 years.

It wasn't until September last year (2025) that I felt the pull of the dits and dahs again. To my surprise, my "fist" came back reasonably quickly. I have no desire to chase high-speed CW, do head-copy or move into the world of paddles. Instead, I've found my home at a comfortable 18 wpm, but generally operate around 12 wpm. I am a not very active member of SKCC - I need to get into this!

I am a straight-key purist. For me, it's about being in total control of the timing and weight of every character - after all, it's an art form. I alternate between a trusty HK-708 and a beautiful, mysterious brass model I rescued from the MOTAT museum's graveyard pile of unloved keys — a piece of history I'm keen to keep on the air.

My current focus is low and slow mobile ops using a XIEGU G90 (a great radio!) and a Windcamp Gipsy dipole. You'll mostly find me participating in NZ Parks on the Air, favoring regional NZ contacts over international at the moment. I believe in using the minimum power necessary to get the job done and enjoy the challenge of QRP operating.

I really can't believe I stayed away for so long. Family came first of course, but coming back and meeting fellow quirky CW operators, yes you Phil (Ed. ZL1PSH), has really energised me as I plod on to retirement. I also volunteer as an AREC operator. I've always wanted to volunteer for something and this fits very well.

Catch you in the ether sometime.

73

John ZL1KLF (and soon also ZL4KLF)

Auckland QRP Weekend



The 1997 IARU Region 3 Conference made the following recommendation. This recommendation was based on a submission by NZART.

"That Region 3 Societies help to promote the IARU objectives for QRP operation, specifically:

- i) to support QRP operation on June 17 each year;
- ii) to foster QRP activities by their members;
- iii) to encourage regular publication of QRP articles in their national magazines;
- iv) to provide QRP sections in any national contests; and
- v) to assist other Societies with the promotion and development of QRP."

Part of the justification for the recommendation was that QRP operations offer advantages such as reducing QRM

and making more effective use of the radio spectrum when compared to higher powered operations.

For at least several years at least, Region 3 has asked its member societies to support the above resolution by doing the following:

- 1) holding a QRP Field Day;
- 2) holding a QRP contest;
- 3) distributing QRP transmitter kits and reference material; and
- 4) holding a workshop on QRP operation.

This year an event called the Auckland QRP weekend (AQRPW) is planned for June 20 and 21 (June 17 is a Wednesday). The aim of the AQRPW is to celebrate Region 3's QRP day, to promote QRP operations and to have fun. The event will be open to all radio amateurs and is not a contest. The permitted modes will be CW, digital, voice, satellite and EME, where QRP for EME is set at 100W. I hope FDU members will participate.



The two days of the AQRPW will have distinct formats. The aim for Saturday is to score points. Your score is your total number of QSO points multiplied by the number of four-character Maidenhead grid squares you had two-way QSOs with. A QSO with the same station on a different band or using a different mode is a separate QSO. The score for a QSO will depend on whether the station is fixed, or portable in a popular public place, or otherwise portable. A QRPP QSO will score twice as much as a QRP QSO.

The aim for Sunday is to achieve one or more of a large number of goals. The goals are intended to require differing effort, interest and skill to achieve. Some examples of the goals are

- a) have QSOs on five bands;
- b) have at least three QSOs using each of CW, voice and digital;
- c) have three QSOs using each of a straight key, paddles and macros on a computer or transmitter;
- d) cycle five kilometres with a portable station and then use the station to make a QSO.

As I said above, I hope FDU members will participate.

CW in NZART's VHF-UHF-SHF-EHF contests

In recent years, the Auckland VHF club has administered four annual VHF-UHF-SHF-EHF contests. These contests are supported by NZART and consist of the following events

- a) DX contest - all bands 6m and up.
- b) Low Band contest - all bands 6m up to and including 70cm.
- c) Microwave contest - all bands 32cm and up.
- d) Field Day contest - all bands 6m and up.

The permitted modes for these contests include CW.

This year's DX contest was held in the middle of February and I participated as a member of the North Shore Radio Club's team. I was on the roster for the club's 6m SSB station. I learned after the contest that no one made CW QSOs during the contest and that this was so for all contests over the last few years.

I see the lack of CW QSOs as a missed opportunity for the hobby in New Zealand. I plan to work with local CW operators to introduce CW into some of the future contests. The emphasis is likely to be on the 6m, 2m and 70cm bands.

Thanks Philip for your regular column. Ed.

Why Should Our Work Die With Us?

By Bob VK6POP



Since the 1990s, computers and software have played an increasing role in Amateur Radio. Software for Amateur Radio often arises out of a need, for instance someone, sometime, thought about creating an electronic log. Others improved on it, adapting for DX activities, QSL despatch and receipt, and contests. Computer logging applications are still occupying the

minds of Amateur Radio software developers.

Somewhere along the way, computers sprouted soundcards, and Amateurs said “hang on - we’ve used complex, specialised equipment previously to transmit and receive modes such as RTTY, PSK31 and others that in the simplest description do various things to audio frequencies which can be transmitted, received and converted into some intelligible form, such as text or speech. Now we can programme a single machine to do all of these things, and more.

There has been some very useful, practical software developed within the hobby. Most of it is offered free of charge to the Amateur Radio community, and a few have progressed to commercial sales or subscription. Then some of it stops, or even vanishes. Where do they go?

I’m about to give some examples, and I’d like to make it clear that they are a few examples, not an exhaustive list, and also that any comments made do not in any way represent judgement of the people involved. Just the facts as they appear.

Apps that stopped development

Something I’ve noticed over the years, (although I’m still a youngster in Amateur Radio. January marked my twentieth year in the hobby), is that some Amateur Radio software simply stops. By this I mean that it stops being developed, and remains frozen in time. Why does this happen?

By far the most common cause of software development stopping appears to be the death of the principal author.

Three Examples:

- Digipan - developed for the PSK modes. I’ve used it often. Development stopped in 2004, on the death of its main author, Skip Teller (KY1T). Nick Fedoseev (UT2UZ) was co-author.
- VK Contest Logger - developed and maintained by Mike Subocz VK3AVV, until his sudden death in early 2022.



- EasyPal - developed by Erik - VK4AES (SK). EasyPal uses DRM protocols to transmit images. Erik died in 2015.

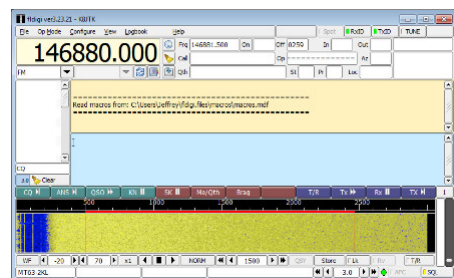
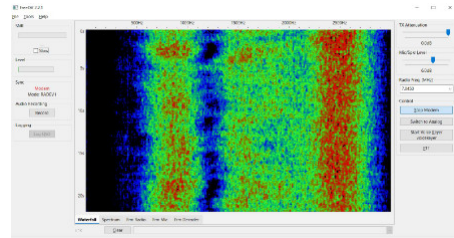
The common thread with these examples is that there was no provision made for the continued development and updating of the software following the passing of the author. Perhaps they didn't expect to die. Most of us don't.

Why does a good idea die with its creator? You could probably write a book on the possible reasons, however let's make a small, albeit incomplete list:

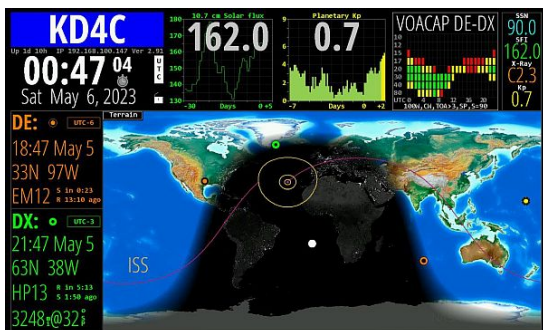
- they didn't know how to share the load, or perhaps were cautious of forming a team
- "it's my project, and I do not want to work with anyone else"
- they were not confident in their coding ability, and thought others would find it messy (eg spaghetti code)

Examples of Successful Development Teams

- **FreeDV**. FreeDV was created in 2012 by David Rowe and David Witten as an open-source, patent-free digital voice solution for HF amateur radio, overcoming limitations of commercial, proprietary codecs. Ongoing development of FreeDV is now with a global team, and the software is still open source.
- **WSJT, WSJT-X** (Weak Signal communication by K1JT) is a premier open-source amateur radio software suite, originating from Joe Taylor's (K1JT) original WSJT program released in 2001. Developed to enable weak-signal communication, it evolved from EME/meteor scatter modes to include the hugely popular FT8 (introduced in 2017) and FT4 modes. The project went open source in 2005.
- **FLdigi** (short for **F**ast **l**ight **d**igital) is a free and open-source program which allows an ordinary computer's sound card to be used as a simple two-way data modem. FLDigi was developed in 2007 by a team led by Dave Freese (W1HKJ).



One that nearly got away



Hamclock is a very popular app. It functions as a kiosk-style app providing real-time space weather, radio propagation, and satellite tracking. The Hamclock app was open source, however the back-end server that drives Hamclock was not.

In early 2026, the Ham world was shocked to hear of the passing of Hamclock's creator, and the operator of the back-end server, Elwood Downey, WB0OEW. Along with the announcement that he ended his own life, was the advice that the back-end server would cease to operate in June. These shock revelations galvanised the Amateur Radio community, and in a very short time, a new back-end server was created, and it is also now open source.

Is there a lesson to take away from this?

Right from the time computers found their way into our Amateur Radio shacks, Amateurs have seen a need, or simply had a bright idea for, some computer application that would become a part of the shack, or perform a particular function.

There was a pretty rough time in the early days when many Amateurs believed that computers would ruin a good radio shack. Some still do. In spite of the resistance, over time computers became integral with Amateur Radio, and have even become integral as the heart of transceivers that are available off the shelf.

Where there's a radio shack equipped with a computer and an Amateur Radio operator with a bright idea, there will be more software developed. Some will be a new take on an old idea (think logging apps), some will be really new - something nobody had thought about.

Open source software (OSS) is computer software with source code that anyone can inspect, modify, enhance, and redistribute freely. Unlike proprietary software, OSS allows users to customize the program, fix bugs, and study how it works. It is generally developed through public, collaborative, and community-driven efforts.



I'd like to suggest to developers that somewhere along the line, especially when they think their product is going to be something, that they seriously consider forming a development team, and perhaps even turn to open source, and to form a community of users, beta testers if you like, to identify glitches and provide suggestions for refinement, or even write the code to implement the suggestion.

This is, after all, an extension of the ethos of Amateur Radio - learning, sharing knowledge, developing things together.

Further reading on Open Source:

Wikipedia, Opensource.com, The Alan Turing Institute.

On the Air, On the Frontier: BAREC's Gredgwin Remote Station

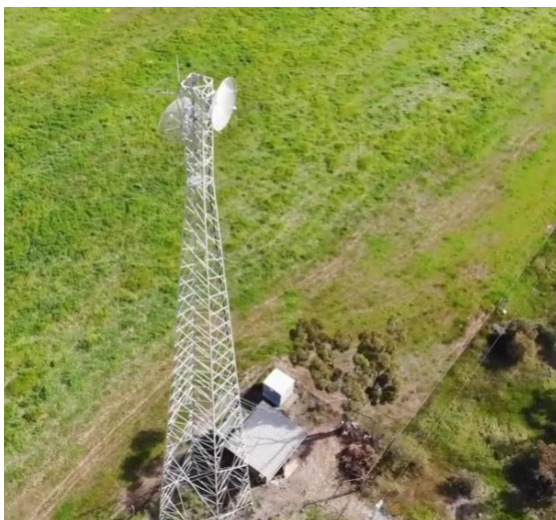
By Neil Patton, VK3ZVX - President BAREC

Boort, Victoria — In a bold step that redefines amateur radio capabilities in Australia, the Bendigo Amateur Radio and Electronics Club (BAREC) has transformed a former television relay site into one of the country's most advanced remote ham radio facilities.

In August 2025, BAREC officially acquired the decommissioned Gredgwin television relay station — located roughly 100 km northwest of Bendigo, near Boort — setting the stage for next-generation remote operations and community communications infrastructure.

A New Base for Remote Operation

The Gredgwin site's remote rural location delivers exceptionally low levels of man-made electrical noise (QRM), a rare asset for radio operations. It sits amid cropping and grazing land on the Murray River floodplain, giving it a near-pristine RF environment. This location makes it ideal for both experimental and practical RF work.



Left: The Gredgwin Station as it appeared in 2025

Right: Now serving the amateur radio community in 2026.

Internet-Accessible SDR

BAREC's first deployment at the site was an internet accessible KiWi SDR (Software Defined Radio). Operators in urban areas can log in remotely and enjoy low-noise reception straight from this high-performance site — a significant boon for members and shortwave aficionados alike.



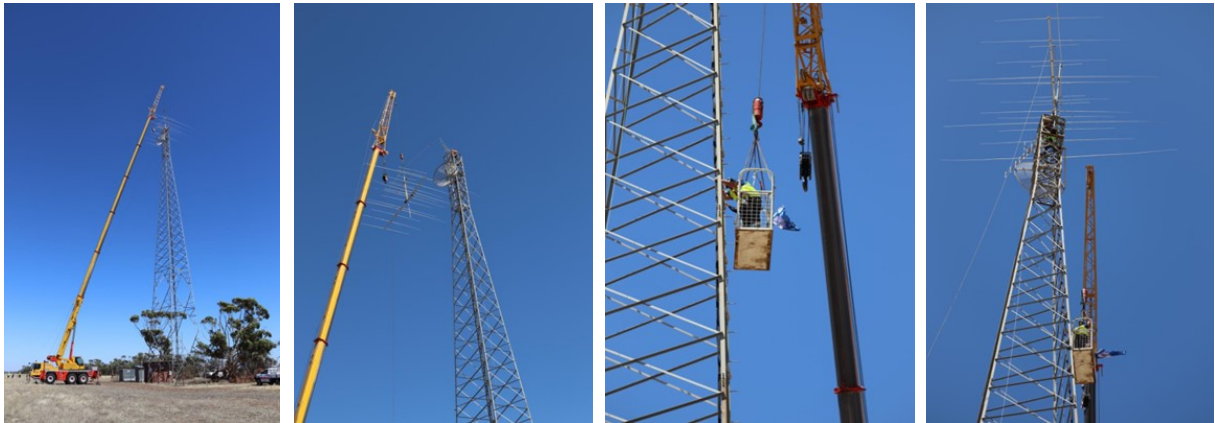
Remote users can access the KiWi SDR at the low-noise Gredgwin site.

Remote Transceiver and Rotatable Beam

Trials are now underway on the fully remote-controlled transceiver system built around **Flex Radio** technology.

The new station will function with legal transmit power and utilise rotatable Yagi antenna arrays mounted about 50 m above ground, enabling solid communications across the world on the 40m, 20m, 15m, 10m & 6m bands.

BAREC is making this capability available to members in early 2026.



02Feb2026: A complex and carefully planned operation with a 70m crane



Riggers: Heath VK3TWO and Neil VK3ZVX



BAREC Vice-President Andrea VK3GOW fitting the control cabling.

Community Service and Emergency Preparedness

BAREC's vision for Gredgwin extends beyond hobby operations. The club has plans for MeshCore and UHF Citizens Band facilities that will bolster communications for Murray River communities, particularly when conventional networks falter during floods or other emergencies.

The 50 m tower, with its ~100 km UHF horizon, also presents opportunities to support automated agriculture, GPS augmentation, and other community-oriented services that benefit from robust radio links.

The People Behind the Project

BAREC's committee and volunteers are the engine behind this achievement. Key figures involved in club operations and the Gredgwin project include:

Neil Patton – VK3ZVX, President
Andrea Wilson – VK3GOW, Vice-President
Don Butler – VK3PDB, Secretary
Phil Rice – VK3BHR, Treasurer
Graeme Knight – VK3GRK, Media Officer
Craig Terry – VK3KLI, AV
Mike Tobin - VK3AHA
Col Herbert – VK3GTV
Colin Lelean – VK3CWL
Ben Thompson – VK3FBLT
Mark Bruechert – VK3PDG



Their sustained efforts in both club administration and technical implementation have been pivotal in realising the Gredgwin site's potential.

Looking Forward

BAREC's Gredgwin initiative exemplifies the innovative spirit of the amateur radio community — blending traditional radio practice with modern remote operation technologies.

As the remote transceiver becomes fully operational, club members and the broader amateur radio community will gain access to a high-performance station capable of serving varied interests, from HF DXing to emergency communication support.

For more on BAREC's activities and how to connect to the Gredgwin SDR or join the club, visit our website, barec.net.au.

Credits - Article: Neil Patton VK3ZVX Pictures: Rex James VK3OF

